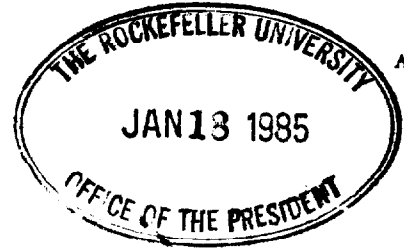


STANFORD UNIVERSITY SCHOOL OF MEDICINE
STANFORD UNIVERSITY MEDICAL CENTER
STANFORD, CALIFORNIA 94305

DEPARTMENT OF FAMILY, COMMUNITY
AND PREVENTIVE MEDICINE

16 January 1985



Area Code 415
497-5081
5546

Dear Josh:


Remembering your interest in chlorine toxicity and the effects of water disinfection on human health, I report to you:

There is increasing use of chloramine in place of chlorine in California, particularly in southern California, to minimize the production of tri-halomethanes. Questions have (quite properly) been raised concerning the effects in persons undergoing hemodialysis. There have also been questions about toxicity to the public, in view of the observation that goldfish that had survived in chlorinated tapwater are killed by the chloraminated water. The obvious explanation in both instances is that chloramine is more persistent, and a higher concentration of this strong oxidizer is reaching the household faucets. It is difficult, however, for public health officers to explain why water that kills goldfish is good for you, so questions are referred to the State Department of Health Services, and that's where I come in as a consultant.

It appears that except for a few reports about the hemodialysis problem and the work done by you and Dr. Shih, there is very little information about the toxicology of chloramine; it has been used for a long time, and has been treated as if it were safe. Medline and Toxline searches have not been very helpful. Yesterday I did some burrowing in Citation Index and found some leads that will take me to the Engineering Library.

I think this may interest you, and I must confess that I also expect that you will have had some thoughts on the subject that might be helpful to me.

With cordial regards,


Rodney R. Beard MD MPH
Professor of Preventive
Medicine, Emeritus